

Title (en)

SYNTHETIC DNA, PROCESS FOR PREPARING IT AND RECOMBINANT MICROBIAL CLONING VEHICLE CONTAINING SUCH DNA

Publication

EP 0001931 A3 19790613

Application

EP 78300598 A 19781106

Priority

US 84969177 A 19771108

Abstract (en)

[origin: EP0001931A2] Synthetic DNA coding for a mammalian polypeptide, e.g. somatostatin, is prepared in which at least a majority of the codons are those preferred for the expression of microbial genomes. The DNA is prepared by joining together two appropriately coded series of fragments by hydrogen bonding and then completing the two strands by ligation, the fragments lacking complementarity other than in the correct sequence. Such synthetic DNA having a restriction endonuclease site at each end of the gene can be introduced into a microbial cloning vehicle which can then be used for transformation of bacterial hosts.

IPC 1-7

C12K 1/02; C07H 21/04

IPC 8 full level

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CPC (source: EP)

C07H 21/00 (2013.01); **C12N 15/00** (2013.01); **C07K 2319/71** (2013.01)

Citation (search report)

- FR 2281426 A1 19760305 - ICI LTD [GB]
- [P] FR 2384024 A1 19781013 - MAX PLANCK GESELLSCHAFT [DE]
- CHEMICAL & ENGINEERING NEWS, vol. 50 (45), 7 November 1977, "Human Gene in E.coli: it works!", page 4
- NATURE, vol. 263, 28 October 1976, K.J. MARIANS et al: "Cloned synthetic lac operator DNA is biologically active", pages 744-748
- [D] CHEMICAL ABSTRACTS, vol. 87, 1977, ref. 50035g, Columbus, Ohio, (USA) A. ULLRICH et al: "Rat unsulin genes: construction of plasmids containing the coding sequences"; & Science 196 (4296) 1977, pages 1313-19
- [P] SCIENCE, vol. 198 (4321), 9 December 1977, K. ITAKURA et al: "Expression in Escherichia coli of a chemically Synthesized gene for the hormone Somatostatin", pages 1056-1063
- [P] CHEMICAL ABSTRACTS, vol. 89, 1978, ref. 159988n, Columbus, Ohio, (USA) L. VILLA-KOMAROFF et al: "A bacterial clone synthesizing proinsulin"; & Proc. Natl. Acad. Sci. (USA) vol. 75 (8) 1978, pages 3727-31
- [A] CHEMICAL ABSTRACTS, vol. 86, 1977, ref. 184866s, Columbus Ohio, (USA) L.A. McREYNOLDS et al: "The ovalbumin gene. III. Insertion of ovalbumin gene sequences in chimeric bacterial plasmids"; & J. Biol. Chem. 252 (6) 1977, pages 1840-1843
- [A] CHEMICAL ABSTRACTS, vol. 87, 1977, ref. 114458g, Columbus, Ohio, (USA) P. HUMPHRIES et al: "Molecular cloning of extensive sequences of the in nitro synthesized chicken albumin structural gene"; & Nucleic Acids Res. 4 (7) 1977, pages 2389-406

Cited by

US5489529A; EP0121352A1; EP0068375A3; EP0036258A3; FR2404013A1; EP0181634A3; US5254463A; EP0046669A1; EP0129268A3; US5496711A; US5525484A; EP0075444A3; EP0046039A1; EP0062971A3; EP0035454A3; EP0717109A1; EP0370458A3; US5859193A; US6153377A; US4565785A; US6538127B1; WO8404538A1; US7588755B1; US7635466B1; US6268122B1; US6270955B1; US6297355B1

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DOCDB simple family (publication)

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